



DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 17

[Docket No. FWS-R1-ES-2022-0061; FXES1113090FEDR –223– FF09E22000]

RIN 1018–BF61

Endangered and Threatened Wildlife and Plants; Establishment of a Nonessential Experimental Population of the Guam Kingfisher, or Sihek, on Palmyra Atoll, USA

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Proposed rule.

SUMMARY: We, the U.S. Fish and Wildlife Service (Service or USFWS), propose to release (meaning introduce) the Guam kingfisher (*Todiramphus cinnamominus*), known locally as the sihek, on Palmyra Atoll as an experimental population under the Endangered Species Act of 1973, as amended (Act). Currently, the sihek exists only in captivity and has been extinct in the wild for more than 30 years. The proposed introduction on Palmyra Atoll is outside the sihek's historical range because its primary habitat within its native range on Guam has been indefinitely altered by the accidental introduction of the predatory brown treesnake (*Boiga irregularis*) in the mid-twentieth century. Tools to manage brown treesnakes at a landscape level are under development, but these tools are unlikely to be available for broad use within the foreseeable future. The introduction of sihek to Palmyra Atoll is not intended to be a permanent introduction that would support a self-sustaining population; rather, it is intended to facilitate the gathering of information and analysis to optimize efforts for reestablishment of the species on Guam once brown treesnakes can be sufficiently controlled at a landscape scale. The introduction of sihek to Palmyra Atoll is also likely to help increase the global population of this extinct-in-the-wild species in advance of a reintroduction effort on Guam. We propose to classify the population as a nonessential experimental population (NEP) under the Act and propose regulations for the take

of sihek within the NEP area. The best available data indicate the introduction of sihek to Palmyra Atoll is biologically feasible and will promote the conservation of the species. We are seeking comments on this proposal.

DATES: We will accept comments received or postmarked on or before [INSERT DATE 30 DAYS AFTER THE DATE OF PUBLICATION IN THE FEDERAL REGISTER]. Please note that if you are using the Federal eRulemaking Portal (see **ADDRESSES**), the deadline for submitting an electronic comment is 11:59 p.m. eastern time on this date.

ADDRESSES: *Written Comments:* You may submit comments on this proposed rule by one of the following methods:

- *Electronically:* Go to the Federal eRulemaking Portal: <https://www.regulations.gov>. In the Search box, enter FWS-R1-ES-2022-0061, which is the docket number for this rulemaking. Then, click the Search button. In the Search panel on the left side of the screen, under the Document Type heading, click on the box next to Proposed Rules to locate this document. You may submit a comment by clicking on “Comment.”

- *By hard copy:* Submit by U.S. mail or hand-delivery to: Public Comments Processing, Attn: FWS-R1-ES-2022-0061; U.S. Fish and Wildlife Service; MS: PRB (JAO/3W); 5275 Leesburg Pike, Falls Church, VA 22041–3803. We will post all comments on <https://www.regulations.gov>. This generally means that we will post any personal information you provide us (see **Public Comments**, below, for more information).

Copies of Documents: The proposed rule is available on <https://www.regulations.gov> under Docket No. FWS-R1-ES-2022-0061.

FOR FURTHER INFORMATION CONTACT: Megan Laut, Pacific Islands Fish and Wildlife Office, U.S. Fish and Wildlife Service, 300 Ala Moana Blvd, Rm 3–122, Honolulu, HI

96850; telephone 808–779–9939. Individuals in the United States who are deaf, deafblind, hard of hearing, or have a speech disability may dial 711 (TTY, TDD, or TeleBraille) to access telecommunications relay services. Individuals outside the United States should use the relay services offered within their country to make international calls to the point-of-contact in the United States.

SUPPLEMENTARY INFORMATION:

Public Comments

We intend that any final action resulting from this proposed rule will be based on the best scientific and commercial data available and be as accurate and effective as possible. Therefore, we invite governmental agencies, the scientific community, the CHamoru community, industry, and other interested parties to submit comments or recommendations concerning any aspect of this proposed rule. Comments should be as specific as possible.

To issue a final rule to implement this proposed action, we will take into consideration all comments and any additional information we receive. Such communications may lead to a final rule that differs from this proposal. All comments, including commenters' names and addresses, if provided to us, will become part of the supporting record.

You may submit your comments and materials concerning the proposed rule by one of these methods listed in **ADDRESSES**. Comments must be submitted to *<https://www.regulations.gov>* before 11:59 p.m. (eastern time) on the date specified in **DATES**. We will not consider hand-delivered comments that we do not receive, or mailed comments that are not postmarked, by the date specified in **DATES**.

We will post your entire comment—including your personal identifying information—on *<https://www.regulations.gov>*. If you provide personal identifying information in your comment, you may request at the top of your document that we withhold this information from public review. However, we cannot guarantee that we will be able to do so.

Comments and materials we receive, as well as some of the supporting documentation we used in preparing this proposed rule, will be available for public inspection on <https://www.regulations.gov>, or by appointment during normal business hours at the U.S. Fish and Wildlife Service, Pacific Islands Fish and Wildlife Office (see **FOR FURTHER INFORMATION CONTACT**).

We are specifically seeking comments concerning:

- Information pertaining to the sihek as it relates to the proposed introduction;
- Effects of the proposed introduction on native species and the ecosystem on Palmyra Atoll; and
- Adequacy of the proposed regulations for the sihek NEP.

We are accepting comments for 30 days as indicated above in **DATES**. A 30-day comment period is consistent with the rulemaking action that established the regulations for establishing NEPs (49 FR 33886, August 27, 1984; p. 33885), which stated that a rulemaking under section 10(j) of the Act will provide a minimum 30-day comment period. We believe that a 30-day public comment period is sufficient for this rulemaking action because the introduction will occur on a remote atoll with very little access. As a result, this rulemaking action will have little public effect, and we expect to receive few if any public comments. More importantly, however, the need to remove the birds from captivity and introduce them into the wild is urgent. Streamlining the rulemaking process as much as possible is necessary to best ensure the welfare of the birds and subsequent success of the introduction.

Peer Review

In accordance with our Interagency Cooperative Policy for Peer Review in Endangered Species Act Activities, which was published on July 1, 1994 (59 FR 34270), and the internal memorandum clarifying the Service's interpretation and implementation of that policy (USFWS in litt. 2016), we will seek the expert opinion of at least three appropriate and independent

specialists regarding scientific data and interpretations contained in this proposed rule. We will send copies of this proposed rule to the peer reviewers immediately following publication in the *Federal Register*. The purpose of such review is to ensure that our decisions are based on scientifically sound data, assumptions, and analysis. Accordingly, the final decision may differ from this proposal.

Background

Statutory and Regulatory Framework for Experimental Populations

Species listed as endangered or threatened are afforded protection primarily through the prohibitions in section 9 of the Act. Section 9 of the Act, among other things, prohibits take of endangered wildlife. “Take” is defined by the Act as harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct. Section 7 of the Act outlines the procedures for Federal interagency cooperation to conserve federally listed species and protect designated critical habitat. It mandates that all Federal agencies use their existing authorities to further the purposes of the Act by carrying out programs for the conservation of listed species. It also requires that Federal agencies, in consultation with the Service, ensure that any action they authorize, fund, or carry out is not likely to jeopardize the continued existence of a listed species or result in the destruction or adverse modification of designated critical habitat. Section 7 of the Act does not affect activities undertaken on private land unless they are authorized, funded, or carried out by a Federal agency.

The 1982 amendments to the Act (16 U.S.C. 1531 et seq.) included the addition of section 10(j), which allows for the designation of reintroduced populations of listed species as “experimental populations.” The provisions of section 10(j) were enacted to ameliorate concerns that reintroduced populations will negatively impact landowners and other private parties, by giving the Secretary greater regulatory flexibility and discretion in managing the reintroduced species to encourage recovery in collaboration with partners, especially private landowners.

Under section 10(j) of the Act, and our regulations in title 50 of the Code of Federal Regulations at 50 CFR 17.81, the Service may designate an endangered or threatened species that has been or will be released within its probable historical range as an experimental population. The Service may also designate an experimental population for an endangered or threatened species outside of the species' probable historical range in extreme cases when the Director of the Service finds that the primary habitat of the species within its historical range has been unsuitably and irreversibly altered or destroyed. All experimental populations are classified as "nonessential" unless we determine that the loss of the experimental population would be likely to appreciably reduce the likelihood of the survival of the species in the wild. We propose to classify the sihek released to Palmyra Atoll as nonessential.

The NEP designation allows us to develop tailored "take" prohibitions that are necessary and advisable to provide for the conservation of the species. The protective regulations adopted for an experimental population in a section 10(j) rule contain the applicable prohibitions and exceptions for that population and apply to all areas described for the nonessential population.

Section 7(a)(2) of the Act requires that Federal agencies, in consultation with the Service, ensure that any action they authorize, fund, or carry out is not likely to jeopardize the continued existence of a listed species or adversely modify its critical habitat. For the purposes of section 7 of the Act, we treat an NEP as a threatened species when the population is located within a National Wildlife Refuge or unit of the National Park Service. When NEPs are located outside of a National Wildlife Refuge or National Park Service unit, for the purposes of section 7, we treat the population as proposed for listing and only sections 7(a)(1) and 7(a)(4) of the Act apply. In these instances, NEPs provide additional flexibility in managing the nonessential population because Federal agencies are not required to consult with us under section 7(a)(2). Section 7(a)(1) requires all Federal agencies to use their authorities to carry out programs for the conservation of listed species. Section 7(a)(4) requires Federal agencies to confer (rather than

consult) with the Service on actions that are likely to jeopardize the continued existence of a species proposed to be listed.

Section 10(j)(2)(C)(ii) of the Act states that critical habitat shall not be designated for any experimental population that is determined to be nonessential. Accordingly, we cannot designate critical habitat in areas where we establish an NEP.

Before authorizing the release as an experimental population of an endangered or threatened species, and before authorizing any necessary transportation to conduct the release, the Service must find, by regulation, that the release will further the conservation of the species. In making such a finding, the Service uses the best scientific and commercial data available to consider the following factors (see 50 CFR 17.81(b)):

(1) Any possible adverse effects on extant populations of a species as a result of removal of individuals, eggs, or propagules for introduction elsewhere (see **Donor Stock Assessment and Effects on Donor Population**, below);

(2) the likelihood that any such experimental population will become established and survive in the foreseeable future (see **Likelihood of Population Establishment and Survival**, below);

(3) the relative effects that establishment of an experimental population will have on the recovery of the species (see **Importance of the NEP to Recovery Efforts**, below); and

(4) the extent to which the introduced population may be affected by existing or anticipated Federal or State actions or private activities within or adjacent to the experimental population area (see **Management**, below).

Furthermore, as set forth at 50 CFR 17.81(c), all regulations designating experimental populations under section 10(j) of the Act must provide:

(1) Appropriate means to identify the experimental population, including, but not limited to, its actual or proposed location, actual or anticipated migration, number of specimens released

or to be released, and other criteria appropriate to identify the experimental population (see

Location and Boundaries of the Proposed NEP Area, below);

(2) a finding, based solely on the best scientific and commercial data available, and the supporting factual basis, on whether the experimental population is, or is not, essential to the continued existence of the species in the wild (see **Is the Proposed Experimental Population Essential or Nonessential?**, below);

(3) management restrictions, protective measures, or other special management concerns for that population, which may include, but are not limited to, measures to isolate and/or contain the experimental population designated in the regulation from natural populations (see **Management**, below; and

(4) a process for periodic review and evaluation of the success or failure of the release and the effect of the release on the conservation and recovery of the species (see **Monitoring and Evaluation**, below).

Under 50 CFR 17.81(d), the Service must consult with appropriate State fish and wildlife agencies, local governmental entities, affected Federal agencies, and affected private landowners in developing and implementing experimental population rules. To the maximum extent practicable, section 10(j) rules represent an agreement between the Service, the affected State and Federal agencies, and persons holding any interest in land that may be affected by the establishment of an experimental population.

Legal Status of the Species and Previous Federal Actions

We listed the sihek as an endangered species under the Act on August 27, 1984 (49 FR 33881). At the time of listing, the sihek was known as the Guam Micronesian kingfisher (*Halcyon cinnamomina cinnamomina*). We designated critical habitat for the sihek on October 28, 2004 (69 FR 62944), consisting of 376 ac (153 ha) on northern Guam. We finalized the Native Forest Birds of Guam and Rota of the Commonwealth of the Northern Mariana Islands Recovery Plan in 1990 and the Revised Recovery Plan for the Sihek or Guam Micronesian

Kingfisher (*Halcyon cinnamomina cinnamomina*) in 2008 (73 FR 67541, November 14, 2008). In 2015, we attempted to revise the taxonomy for sihek under the Act through a direct final rule (see 80 FR 35860, June 23, 2015), but due to a minor administrative error in that rule the sihek's corrected taxonomy is not yet reflected on our List of Endangered and Threatened Wildlife (List; 50 CFR 17.11). We are currently in the process of updating 50 CFR 17.11 to reflect that the Guam Micronesian Kingfisher (*Halcyon cinnamomina cinnamomina*) should be the Guam kingfisher (*Todiramphus cinnamominus*) on the List. Throughout this document, we refer to the species as the sihek because that is the locally used common name on Guam.

Biological Information

Species Description

The sihek is a sexually dimorphic (the sexes are outwardly different in appearance) forest kingfisher (Baker 1951, p. 229). The adult male has a brown head, neck, upper back, and underparts. A black line extends around the nape (back of the neck), and the eye ring is black. The lower back, lesser and underwing coverts, and shoulder feathers are greenish-blue, and the tail is blue. The bill is black. The female's markings are similar to the adult male, but the upper breast, chin, and throat are paler, and the remaining underparts are white instead of cinnamon. Sihek are relatively small, about 8 inches (in) (20 centimeters (cm)) in length (Del Hoyo et al. 2001, p. 220). Adult sihek range in weight from 53 to 85 grams (g) (1.7–3.0 ounces (oz)) (Baker 1951, p. 228; Jenkins 1983, p. 21).

Historical and Current Range

The sihek is a nonmigratory species endemic to Guam and historically occurred in all habitats throughout Guam except pure savanna and wetlands (Marshall 1949, p. 210, Baker 1951 p. 229; Jenkins 1983, pp. 22–23). They were described as “fairly common” by Baker (1951, p. 229). However, the population declined rapidly in the mid-twentieth century due primarily to predation by the brown treesnake. The last remaining wild sihek were taken into captivity

between 1984 and 1986, and sihek were considered extinct in the wild by 1988 (Wiles et al. 2003, p. 1357). For more than 30 years, the species has existed only in captivity, as discussed further in the *Recovery Efforts to Date* section, below.

Life Cycle

Sihek are socially monogamous, and breeding activity appears to be concentrated from December to July (Marshall 1949, p. 210; Baker 1951, p. 228; Jenkins 1983, p. 23). They nest in cavities, with nests documented in a variety of trees, including *Ficus* spp. (banyan), *Cocos nucifera* (coconut), *Artocarpus* spp. (breadfruit), *Pisonia grandis* (umumu), and *Tristiropsis obtusangula* (faniok) (Baker 1951, p. 228; Jenkins 1983, p. 24; Marshall 1989, p. 473). Both male and female sihek incubate eggs and brood and feed nestlings (Jenkins 1983, p. 24). Eggs are white and reported clutch sizes from wild populations (n=3) were either one or two eggs (Baker 1951, p. 228; Jenkins 1983, p. 24; Marshall 1989, p. 474). Incubation, nestling, and fledgling periods for sihek in the wild are unknown. However, incubation and nestling periods of captive birds averaged 22 and 33 days, respectively (Bahner et al. in litt. 1998, p. 21).

Sihek feed entirely on animal matter including skinks (Scincidae), geckos (Gekkonidae), various insects, segmented worms (Annelida), and hermit crabs (*Coenobita* spp.) (Marshall 1949, p. 210; Baker 1951, pp. 228–229; Jenkins 1983, pp. 23–24). Seale (1901, p. 45) also reported that sihek were known to prey on the chicks of domestic fowl, and Marshall (1949, p. 210) noted fish scales in the stomach contents of collected sihek. They typically forage by perching motionless on exposed branches or telephone lines and swooping down to capture prey off the ground with their bill (Jenkins 1983, pp. 23–34). They will also capture prey off nearby foliage and have been observed gleaning insects from bark (Maben 1982, p. 78).

Habitat Use

Relatively little is known about the habitat use of sihek. Mature forests with appropriate nest sites were probably an important component for successful reproduction and survival. The sihek is a cavity nester and apparently requires large, standing dead trees. Nest trees were

reported as averaging 43 centimeters (17 inches) in diameter (Marshall 1989, p. 475). Sihek also appear to require diverse vegetative structure capable of providing a wide range of both invertebrate and vertebrate prey as well as exposed perches and areas of open ground for foraging (USFWS 2002, p. 63739). Good-quality sihek habitat would therefore provide a combination of closed canopy forest with large, standing dead trees for nesting, and areas of open understory or forest edges for foraging (Jenkins 1983, pp. 22–23; Marshall 1989, pp. 475–476; USFWS 2002, p. 63739).

Movement Ecology

Records of distributions and intraspecific territorial behaviors for sihek suggest they maintained exclusive year-round territories (Jenkins 1983, pp. 24–25). Little else is known about their movement ecology. On the island of Pohnpei, Micronesian kingfishers (*Todiramphus reichenbachii*), a species from the same genus as sihek, demonstrated an average territory size of 8.1 hectares (ha) (20 acres (ac)) and showed stable boundaries within and between years (Kesler and Haig 2007, p. 387); birds dispersing from their home territory were observed to establish new territories a maximum distance of 4,501 feet (1,372 meters) from the original site (Kesler and Haig 2007, p. 389). The sihek is an island endemic and has not been observed flying over open ocean.

Causes of Decline and Threats

The primary cause of the sihek's extinction in the wild was due to predation by the introduced brown treesnake (USFWS 2008, p. 21). This invasive species probably arrived on Guam prior to 1950 as stowaways on shipping materials (Savidge 1987, p. 662). Brown treesnakes were likely introduced in southern Guam and expanded their range, reaching the northernmost point of the island by 1968 (Savidge 1987, p. 663). Sihek were last recorded from southern Guam in the 1970s (Drahos 1977, pp. 153–154), and by 1985, Marshall (1989, p. 476) reported only 30 sihek in the northern part of the island. Sihek were considered extinct in the wild by 1988 (Wiles et al. 2003, p. 1357). The continued islandwide presence of brown

treesnakes on Guam precludes consideration of Guam as a viable reintroduction site for sihek for the foreseeable future.

Other factors that likely impacted sihek on Guam include predation by feral cats (*Felis catus*), rats (*Rattus* spp.), and monitor lizards (*Varanus tsukamotoi*), habitat degradation from development and typhoons, human persecution, contaminants, and competition with and harassment by black drongos (*Dicrurus macrocercus*) (USFWS 2008, pp. 16–17). Our Revised Recovery Plan for the Sihek or Guam Micronesian Kingfisher (USFWS 2008, pp. 16–26) provides further description of these threats.

Recovery Efforts to Date

Criteria for reclassifying the sihek from an endangered to threatened species (“downlisting”) include establishing two subpopulations on Guam (one in the north and one in the south) of at least 500 individuals each that are stable to increasing over at least 5 consecutive years; sufficient habitat is protected and managed to achieve the population criteria; and brown treesnakes and other introduced predators are managed at levels sufficient to meet the population criteria. The criteria to delist (remove protections of the Act for) the sihek include two subpopulations on Guam of at least 1,000 individuals each (one in the north and one in the south) that are stable or increasing, with sufficient habitat and predator control to support the population criteria (USFWS 2008, pp. 40–43). Our recovery plan acknowledged that the interim step of introducing sihek outside of its historical range may be necessary before we are able to reestablish sihek populations on Guam (USFWS 2008, p. 40).

Habitat Protection

Over the past 30 years, the Service has worked with a number of stakeholders to provide habitat protection in support of recovering Guam’s native species. The habitat protections described below were intended for federally listed species on Guam in anticipation of our eventual ability to control brown treesnakes and allow the reintroduction of sihek and other locally extinct species. In 1993, the U.S. Air Force, U.S. Navy, and Service entered into a

memorandum of understanding to create the Guam National Wildlife Refuge. As per the terms of the memorandum of understanding, the two military branches entered into cooperative agreements with the Service in 1994 to designate Department of Defense lands as overlay units in the Guam National Wildlife Refuge (i.e., these overlay units of Refuge lands are under the jurisdiction of the Department of Defense but managed by the Service as part of the Refuge). Currently the Guam National Wildlife Refuge includes 152 ha (376 ac) of lands under the jurisdiction of the Service and 9,300 ha (22,980 ac) of overlay lands under the jurisdiction of the U.S. Navy and U.S. Air Force, and all are managed by the Service as the Refuge.

Additionally, the Government of Guam established four reserves for habitat protection. These lands are under the jurisdiction of the CHamoru Land Trust Commission of the Government of Guam. The Commission has the authority to change the status of these lands to non-conservation areas as they deem appropriate. Please see the Revised Recovery Plan for the Sihek or Guam Micronesian Kingfisher (USFWS 2008, pp. 33–37) for further description and maps of the Department of Defense and Government of Guam protected areas.

More recently, the Department of Defense and the Service entered into two agreements to protect or manage habitat for sihek and other federally listed species on Guam. A 2020 memorandum of understanding between Joint Region Marianas and the Service outlined a mutual understanding regarding the intentions and future considerations of a Department of Defense readiness and environmental protection integration initiative to address conservation of upland vegetation communities for the sihek as well as other federally listed species on Guam. In 2015 a memorandum of agreement between the Department of the Navy and the Service designated 2,118 ha (5,234 ac) of habitat for the recovery and survival of the sihek in Northern Guam in response to loss of habitat described in the Service's 2015 Marine Corps Relocation Biological Opinion (USFWS 2015, entire).

Brown treesnake control

We currently lack tools to eradicate brown treesnakes from Guam, and the continued presence of brown treesnakes throughout the landscape prevents the successful reestablishment of sihek on Guam in the foreseeable future. However, we have made some incremental progress in addressing this threat. Since 2010, the interagency Brown Treesnake Technical Working Group has advanced landscape-scale brown treesnake suppression capabilities with the development and refinement of an aerial delivery system for toxicant baiting, comprising an automated bait manufacturing system and an automated dispensing module for applying baits from aircraft. Aerial toxicant baiting has recently been evaluated in both fenced and non-fenced 55-ha (136-ac) sites; brown treesnake suppression, but not eradication, has been validated using this technique (Siers et al. in litt. 2020, p. 4). Further, simulated aerial baiting for brown treesnake eradication within a 5-ha (12-ac) brown treesnake exclusion area indicates that some brown treesnake size classes do not consume baits and additional control tools are needed to achieve suppression objectives and/or eradication (Siers et al. in litt. 2020, p. 4).

Island-wide eradication of invasive vertebrates has been achieved on 965 islands for various taxonomic groups (see Keitt et al. 2011, <https://diise.islandconservation.org/>); however, snake eradication efforts are rare, and there is only one other documented ongoing effort to eradicate snakes from an island (<https://diise.islandconservation.org/>). Additional technological and methodological advancements along with community engagement are still needed to achieve landscape-scale eradication of brown treesnakes on Guam. The aerial delivery system tools are operational, but full operational implementation of the aerial suppression program will require further understanding of site-specific effects of the technology and development of efficient monitoring protocols. Therefore, while technological advances to control brown treesnakes show promise as a tool, they currently do not control snakes to a level sufficient to allow the return of sihek to Guam in the foreseeable future (i.e., before significant declines in the ex situ population of sihek are likely to occur). Thus, interim conservation measures for sihek are necessary to

reduce its extinction risk while brown treesnake suppression and eradication methods are perfected and implemented.

Captive Breeding Efforts

In 1983, the Association of Zoos & Aquariums (AZA) initiated the Guam Bird Rescue Project in response to the widespread decline of Guam's native birds. The sihek was one of the Guam birds selected under this program for captive (ex situ) conservation efforts (Hutchins et al. in litt. 1996, p. 4). Between 1984 and 1986, 29 sihek were translocated from Guam to several zoos in the mainland United States. The program was established with the intent of being a short-term rescue but ultimately led to a breeding program due to the continued presence of brown treesnakes on Guam, which have prevented the reestablishment of sihek within their native range. By 1990, the ex situ population increased to 61 sihek in 12 mainland zoos. Currently, an estimated 152 sihek are held at 24 AZA institutions and in a facility at the Guam Department of Agriculture's Division of Aquatic and Wildlife Resources (DAWR) (Newland, S., in litt. 2021a).

A Species Survival Plan Program for sihek, developed by the AZA, has been in place since 1986. In general, Species Survival Plan Programs are established to oversee the population management of species within AZA-accredited facilities. The plans typically include a population studbook and an annual breeding and transfer plan to ensure the genetic and demographic health of the population. The donor population is carefully managed through the Species Survival Plan Program to ensure the population's long-term viability.

Sihek are relatively difficult to manage in zoos because of their aggressive territorial behavior and moderately expensive diet. In addition, little forward progress toward a recovery program in the wild has led to few new institutions willing to hold or breed the species, which ultimately limits population growth. The small founding population, as well as the limited ability to increase the population beyond its current size, has serious implications for long-term survival of sihek.

Two separate population viability analyses (PVAs) demonstrated rapid declines in the population under current conditions (Johnson et al. in litt. 2015, p. 8; Trask et al. 2021, p. 6). Without changes to management practices that increase reproduction (i.e., reproductive output stays the same), the sihek population is predicted to decline to below 100 individuals by the year 2040 (Johnson et al. 2015, p. 8); and with a slight decrease in reproductive output of just 7 percent, the population is projected to decrease to 25 individuals by 2040 (Johnson et al. 2015, p. 9). The PVA developed by Trask et al. (2021, entire) incorporated an inbreeding coefficient into their models and demonstrated, among other things, a rapid decline in the population without an increase in reproductive output such that in 50 years the mean population size is projected to decline to approximately 30 individuals. The ex situ population of sihek is therefore sensitive to even slight reductions in reproductive output and is at a heightened risk of extinction due to small population dynamics in their existing limited breeding and holding space. However, a small increase in average annual reproductive output (from 2.54 hatchlings per female per year to 2.70 hatchlings per female per year) could support long-term (50-year) sihek population viability as well as a release program (Trask et al. 2021, p. 6).

Breeding facilities for sihek are currently at capacity. Without the ability to release sihek, the species' population growth is constrained. The sihek's current small population size puts the species at risk from stochastic environmental events (e.g., disease outbreaks in the ex situ population or changes in the ability of facilities to house and breed sihek) and demographic threats (e.g., sex-ratio biases, as well as from genetic threats from increasing rates of loss of genetic diversity and accumulation of inbreeding). Further, maintaining the species entirely under captive environmental conditions puts the species at risk from genetic adaptations to captivity (Frankham 2008, entire). This situation could result in individuals having reduced fitness under wild conditions and could negatively impact the success of efforts to ultimately recover the species on Guam.

Reintroduction

No efforts have been made to reintroduce the sihek to its native range on Guam due to the continued presence of brown treesnakes, the primary threat that caused its extinction in the wild. Further, until recently, the ex situ population of sihek was not large enough to sustain a release program. Analyses by Trask et al. 2021 (p. 7) have shown that, with captive management aimed at increasing reproductive output, the ex situ population can support the releases proposed for an experimental population on Palmyra Atoll.

Location and Boundaries of the Proposed NEP Area

The proposed NEP area for sihek occurs outside the species' historical range and encompasses the 250 ha (618 ac) of emergent land distributed among the 25 islands that make up Palmyra Atoll (Collen et al. 2009, p. 712), and inclusive of the lagoons surrounding those islands. The islands vary in size from approximately 0.1 to 97.9 ha (0.24 to 242 ac). Palmyra Atoll is located in the Northern Line Islands, approximately 1,000 miles (1,609 km) south of Honolulu, Hawaii, and 3,647 miles (5,869 km) east of Guam (5° 53'N latitude, 162° 05'W longitude). Palmyra Atoll is considered a wet atoll with high humidity, typically greater than 90 percent, and temperatures between 75 and 81 °F (24–27 °C) and rainfall averages 175 inches (in) (444.5 centimeters (cm)) per year (Hathaway et al. 2011, p. 6), without a specific rainy season. Temperatures on Guam are slightly higher, ranging 75–90 °F (24–32 °C), with rainfall averaging 98 in (249 cm), with the greatest rainfall occurring between July and November (<https://www.weather-us.com/en/guam-usa-climate>).

The closest landmass is more than 232 km (144 mi) from Palmyra. Given this and the fact that sihek are an island endemic not known to undertake long-distance flights over open ocean, it is extremely unlikely that sihek would move outside of the NEP area and survive. Also, no other kingfisher species occur on Palmyra Atoll, thus all kingfishers on the atoll will be members of the NEP.

Land Ownership

Palmyra Atoll is currently owned and managed by the Service, The Nature Conservancy, and the Cooper family. The majority of the islands (158 ha (390 ac)), waters, and the coral reefs surrounding Palmyra Atoll, up to 12 nautical miles to sea, are owned by the United States and managed by the Service as a National Wildlife Refuge. Palmyra Atoll National Wildlife Refuge was established in 2001 to protect, restore, and enhance migratory birds, coral reefs, and threatened and endangered species in their natural setting. The Nature Conservancy owns two islands, Cooper and Menge (91.5 ha (226 ac)) and cooperatively manages the atoll with the Service. Home Island (0.71 ha (1.8 ac)) is under private fractional ownership by the Cooper family, and the Service provides stewardship for this island, providing it the same protections as Refuge property (Kropidlowksi, in litt. 2021). Palmyra Atoll is also part of the Pacific Remote Islands Marine National Monument, which was established in 2009 and is co-managed by the Service and the National Ocean and Atmospheric Administration.

Likelihood of Population Establishment and Survival

In late 2020, we established a recovery team for sihek whose purpose is to assist the Service in developing and implementing a conservation strategy for reestablishing sihek in the wild. Members of this team developed a phased approach whereby learning sites (sites used to test conservation translocation procedures as well as demographic and behavioral responses of target species) help achieve the overarching objectives of reducing global sihek extinction risk, while also refining techniques to establish viable wild populations on Guam. Based on habitat suitability, food resource availability, and willing partners, we have identified Palmyra Atoll as a proposed learning site.

The best available scientific data indicate that the introduction of sihek into suitable habitat is biologically feasible and would promote the conservation of the species. Coarse-scale modeling indicated Palmyra could support up to 15 breeding pairs (Laws and Kesler in litt. 2011, p. 65). We evaluated the ecological suitability of Palmyra Atoll and concluded sufficient habitat

conditions and food resources are available to support the small number of sihek needed for a temporary training site (USFWS unpub.). Further, we developed a proposed release and monitoring program that includes interventions such as supplemental feeding if needed to increase the chances of survival. To minimize risk associated with the introduction, we are assessing potential environmental impacts in the proposed NEP area in a draft environmental assessment (See *National Environmental Policy Act* section, below) and will monitor for these potential impacts as part of the release program.

Potential Effects of Activities on Palmyra Atoll on Introduced Sihek

The effects of Federal, State, or private actions and activities on Palmyra Atoll that are ongoing and expected to continue are not likely to adversely affect the sihek within the proposed NEP area. Public access to Palmyra Atoll is extremely limited and available in only the following ways: (1) working for, contracting with, or volunteering for the Service or The Nature Conservancy; (2) conducting scientific research via Service special use permits; (3) invitation through the Service or The Nature Conservancy; or (4) by private recreational sailboat or motorboat. With prior approval by the Service, privately owned vessels are permitted to access the Palmyra Atoll National Wildlife Refuge. A maximum of two vessels are allowed at one time. Access to Cooper Island must be arranged and secured through The Nature Conservancy. Activities currently occurring in the proposed NEP area, and those likely to occur, are not likely to impede the introduction effort. Current activities on Palmyra Atoll include an ongoing rainforest restoration project, operation of a research station, and limited recreation. The rainforest restoration project includes control of nonnative coconut trees, and opportunistic planting and seeding of native tree species. The Nature Conservancy manages a research station, and visiting scientists are required to obtain a permit from the Service to ensure compatibility with the mission of the Refuge. The Nature Conservancy also provides guided recreational activities (fishing, kayaking) to a small number of visitors to the Atoll. No significant development is planned on the Atoll for the foreseeable future.

Importance of the NEP to Recovery Efforts

We are proposing to introduce a nonessential experimental population of sihek on Palmyra Atoll to promote the conservation and recovery of the species. The International Union for the Conservation of Nature's Guidelines for Reintroduction and Other Conservation Translocations (2013, p. 4) identifies several criteria to consider prior to undertaking a reintroduction, including "strong evidence that the threat(s) that caused any previous extinction have been correctly identified and removed or sufficiently reduced." Although the basic habitat components required by the sihek on Guam are still present, they have been made unavailable to the sihek in the foreseeable future due to the ongoing and pervasive threat of brown treesnakes (see *Recovery Efforts to Date*). Innovations in brown treesnake management show promise for controlling their populations at a landscape level but not within the time needed to prevent further deleterious impacts to the ex situ sihek population. Also the current captive-only sihek population is at high risk of extinction, and a moderate decline in reproductive output is likely to have long-term negative consequences on the survival probability for this species (see *Captive Breeding Efforts and Reintroduction*). The number of breeding institutions participating in sihek management is limited and declining (Newland in litt. 2021b), further increasing the risk of reduced breeding effort and its associated population decline. Advancements in brown treesnake control show promise for reintroducing sihek to its native range on Guam in the future, but current control methods are not likely to be able to eradicate this threat prior to substantial forecasted declines in the sihek population.

We propose to release sihek onto Palmyra Atoll, which is outside its historical range, for the following purposes: (1) invigorate the ex situ conservation program to increase reproductive output by increasing breeding space at existing facilities and/or recruiting additional facilities to join the ex situ conservation program; and (2) develop and refine release and monitoring methods to be applied when reestablishing a population on Guam to recover the species. Release

of sihek on Palmyra Atoll will improve the likelihood of successful reintroduction and recovery on Guam by: (1) providing the opportunity to develop and test release and monitoring techniques, (2) providing information on the sihek's ability to survive in the wild, (3) assessing how much human intervention is required to support a wild population, (4) increasing the global population of sihek as an extension of the ex situ population as well as invigorating the breeding program, and (5) potentially serving as a source of wild-hatched birds for future releases on Guam or other sites.

Is the Proposed Experimental Population Essential or Nonessential?

When we establish experimental populations under section 10(j) of the Act, we must determine whether that population is essential or nonessential to the continued existence of the species. This determination is based solely on the best scientific and commercial data available. Our regulations (50 CFR 17.80(b)) state that an experimental population is considered essential if its loss would be likely to appreciably reduce the likelihood of survival of that species in the wild. We are proposing to designate the population of sihek on Palmyra Atoll as nonessential for the following reasons:

- (1) No populations of sihek occur in the wild currently;
- (2) the proposed experimental population area is too small to support a self-sustaining wild population of sihek (Laws and Kesler 2011, p. 63) and is intended only as a temporary training site (i.e., approximately 10 or more years) for us to improve release techniques, monitoring, and adaptive management for population establishment on Guam, when its habitat is available; and
- (3) loss of the experimental population would not preclude other recovery options, including future efforts to establish sihek populations elsewhere.

In addition, we evaluated the potential impacts of the establishment of the experimental population on the ex situ population. Establishment of the proposed experimental population will

not affect the potential to establish a future, self-sustaining, wild population of sihek on Guam for the following reasons:

(1) The majority of the sihek population will remain in an ex situ population distributed among 25 facilities, where they are carefully managed according to the Species Survival Plan Program (Newland in litt. 2021a); and

(2) only a small number of individuals will be removed from the ex situ population for release on Palmyra Atoll, and these removals are expected to have minimal impact on the survival of the ex situ population (see **Donor Stock Assessment and Effects on Donor Population**, below).

As mentioned above in **Importance of the NEP to Recovery Efforts**, the proposed introduction on Palmyra Atoll will further the conservation of sihek both in terms of improving the status of the ex situ population and in increasing the likelihood of success in establishing wild populations. In the near term, we anticipate that the introduction of sihek to Palmyra Atoll will invigorate the ex situ breeding program and result in more breeding space at existing facilities, more institutions joining the program, or both, ultimately resulting in a larger population if additional institutions join. Space is a limiting factor for this extinct-in-the-wild species and demonstrating our intent to recover it in the wild will likely increase interest in the species (Newland in litt. 2022). In the longer term, the information gathered from observing the species under wild conditions, development of suitable release and monitoring methods, and assessment of how much human intervention might be needed to support a wild population will improve future release efforts. Lastly, wild-hatched sihek could be a complementary source, alongside captive-bred birds, for translocation to Guam or other sites.

Release Procedures

Late-stage nestlings or recent fledglings will be flown to Palmyra Atoll where they will be held in release aviaries for up to one month. Three sets of three flight aviaries will be

established across Palmyra Atoll at, or close to, locations where habitat appears most suitable. During this time, they will undergo acclimation and training to respond to supplementary feeding signals. Prior to release, all sihek will be fitted with a radio transmitter consistent with the Bird Banding Laboratory of North America's guidelines that transmitters be no more than 3 percent of a bird's body weight (Gustafson et al. 1997).

Releases from aviaries will be via opening of a panel in the aviary wall to allow individuals to come and go freely. We will monitor each sihek daily, immediately after release and throughout their first year of release. After the first year, we may reduce the intensity of monitoring if no problems are observed. Sihek monitoring will cover a range of components, including general behavior (maintenance, foraging, locomotion, conspecific interactions); health (weights collected remotely at feeding stations, fecal samples, semiannual capture and assessment); and breeding (pairing, territoriality, nest excavation, nest building, egg laying and clutch size, hatch date, nestling survival, and fledge success). Additional details of the release procedures are provided in the Sihek Management Plan (see Andrews et al. in litt. 2022).

Donor Stock Assessment and Effects on Donor Population

The donor population for the proposed introduction of sihek to Palmyra Atoll is the ex situ population of sihek. This population is distributed among 25 breeding facilities in the U.S. mainland and on Guam (24 AZA institutions and 1 Guam Department of Agriculture (DAWR) facility), with the population being managed through the Sihek Species Survival Plan Program (see *Captive Breeding Efforts*). The most recent population count documented 152 birds (Newland in litt. 2021a). The population size remains below the target of 200 individuals identified in the 2020 Species Survival Plan Program (Newland et al. 2020, p. 2) in large part due to limited holding capacity across the breeding facilities. Recent funding for the construction of another facility at Brookfield Zoo, as well as for the transfer and maintenance of sihek to the facility, has expanded capacity to allow for growth of the population. The current Species

Survival Plan Program coordinator is actively seeking additional AZA institutions to participate in the sihek breeding effort, and this solicitation will likely be aided by releases to Palmyra Atoll and the recent progress in recovery planning for the species.

Population models indicate that an increase in breeding (i.e., production of hatchlings) is required to ensure the sustainable removal of individuals from the ex situ population for release to Palmyra (Johnson et al. 2015, p. 13, and Trask et al. 2021, p. 6). In the past, we have observed measurable population increases with focused management to increase productivity in the ex situ population. Between 2004 and 2013, the sihek population increased from 61 birds to a peak of 157 birds as a result of increased reproductive output using multiple clutching (when a breeding pair is induced to produce more than one clutch of eggs per year by removing and artificially incubating the first clutch of eggs) (Newland et al. *in litt* 2020, pp. 4–5). The best available information indicates that increasing ex situ reproductive output to rates seen between 2004 and 2013 is likely to support a release program on Palmyra without negatively impacting the long-term viability of the species (Trask et al. 2021, p. 6).

Only a small number of sihek will be removed from the ex situ population for release on Palmyra Atoll. We plan to remove up to 9 in the first year, and fewer than 9 in subsequent years to ultimately achieve a target of 10 breeding pairs. The release cohort will consist of hatch-year sihek that will be reared under pathogen- and vector-free conditions. All individuals will be health-screened prior to release. Release cohorts will consist of sihek that are relatively unrelated to each other (i.e., sihek with low mean kinship), and that have a relatively low individual inbreeding coefficient. In addition to genetic considerations for released individuals, retaining maximum genetic diversity within the ex situ population is a priority; therefore, individuals identified as genetically valuable (i.e., with a low mean kinship coefficient, such that they are genetically underrepresented in the ex situ population) will be retained in the ex situ population. We will assess selection of individuals in release cohorts for follow up translocations based on

both the sex ratio and genetics of the introduced population on Palmyra Atoll, as well as that of the donor population.

Species Survival Plan Program annual reports (see *Captive Breeding Efforts*) will continue throughout the releases, and will be reviewed to ensure that removal of individuals for release will not be detrimental to the stability of the ex situ population. If negative impacts on the donor population are detected, we will pause releases while donor population health is improved. Given the careful management of the donor population, the ability to artificially increase its productivity, and the relatively small number of sihek that will be released annually, negative impacts to the donor population are expected to be minimal.

Management

We will collaborate with Guam DAWR, Zoological Society of London, AZA, Calgary Zoo, Palmyra Atoll National Wildlife Refuge, and The Nature Conservancy on releases, monitoring, coordination, and other tasks as needed to ensure successful introduction of the species to Palmyra Atoll. A few specific management considerations are addressed below.

Incidental Take: Experimental population rules contain specific prohibitions and exceptions regarding the taking of individual animals under the Act. These rules are compatible with most routine human activities in the proposed NEP area (e.g., resource monitoring, invasive species management, and research; see **Importance of the NEP to Recovery Efforts**, above). Section 3(19) of the Act defines “take” as “to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.” “Incidental take” is further defined as take that is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity. If we adopt the 10(j) rule as proposed, incidental take of sihek within the experimental population area would be allowed, provided that the take is unintentional and not due to negligent conduct.

Special Handling/Intentional Take: If we adopt the 10(j) rule as proposed, employees of the Service, Guam DAWR, The Nature Conservancy, Zoological Society of London, the Calgary Zoo, AZA facilities holding sihek, and authorized agents acting on behalf of the Service or these other entities, may intentionally take sihek through handling sihek for scientific purposes; relocating individuals or bringing individuals into captivity for the purposes of increasing sihek survival or fecundity; aiding sick or injured sihek; salvaging dead sihek; disposing of a dead specimen; or aiding in law enforcement investigations involving the sihek. Any other person would need to acquire a permit from the Service for these activities.

Interagency Consultation: For purposes of section 7(a)(2) of the Act, section 10(j) of the Act and our regulations (50 CFR 17.83) provide that nonessential experimental populations are treated as species proposed for listing under the Act except on National Park Service and National Wildlife Refuge System lands, where they are treated as threatened species for the purposes of section 7(a)(2) of the Act. We intend to address our section 7(a)(2) consultation obligations for sihek within the Palmyra National Wildlife Refuge through a programmatic intra-Service consultation prior to finalizing this rule. Any activities outside of those analyzed in our programmatic consultation that may affect sihek within the NEP area would be addressed through future individual intra-Service section 7 consultations.

Public Awareness and Cooperation: On November 18, 2021, in cooperation with Guam DAWR, we engaged the Governor of Guam and constituents to inform them of the proposed introduction of sihek to Palmyra Atoll. We have coordinated closely with the co-manager of Palmyra Atoll (The Nature Conservancy) throughout the planning process, and we expect our coordination with them will continue through the duration of the project. Public comments received on this proposed rule and our forthcoming draft environmental assessment will be considered in our final determinations.

Monitoring and Evaluation

We will monitor the health, habitat use, behavior, foraging activity, movement, breeding, and survival of all sihek released and hatched at Palmyra Atoll. We will attempt to weigh sihek daily at supplementary feeding platforms with inbuilt scales. Passive collection of fecal material from these supplementary feeding platform visits will be screened for gastrointestinal parasite loads and examination of diet. We will attempt to capture individuals twice each year for a more thorough physical examination (weight, condition, ectoparasite load, feather fault bar analysis). During these captures, we will take a blood sample, which will be stored in ethanol for later diagnostics of blood parasites, and a blood smear made for visual examination of blood parasites and white blood cell count analysis. Further, we will collect a fecal sample opportunistically and a cloacal swab for later bacterial culture.

Once each sihek is released, we will track it and attempt to log its location at least once daily to document post-release movement patterns and territory establishment. Individuals will be located via radio transmitter tracking or visual searches. During observations, we will record behaviors including maintenance, perching, ingestion, excretion, locomotion, vocalizations, and interactions. We will record food items whenever feeding is observed in free-flying sihek.

We will attempt to closely monitor all breeding attempts to determine timing of pairing, nest building, egg laying and clutch size, hatch date, nestling survival, and fledge success. Unhatched eggs will be collected for analysis of fertility and embryo development. Recovered dead nestlings will be necropsied in the field and samples taken for later laboratory analysis for cause of death. Where possible, surviving nestlings will be weighed every third day throughout development until banding age. During banding, we will collect a range of samples as specified above for adult health sampling.

We will create a resighting history for each sihek released or hatched into the population. We intend to monitor sihek and their prey species with the full-time presence of staff on Palmyra, at least until intensive monitoring shows: (1) sihek are foraging independently and exhibiting behaviors typical of *Todiramphus* species; and (2) sihek are not having unacceptable

impacts on prey species populations (unacceptable impacts are described further in the sections below). If the two situations described above occur, then we may reduce staffing to less than full time and monitor sihek and the environment less intensively.

Ecosystem Impacts

As Palmyra Atoll is outside the native range of the sihek, introduction of sihek to Palmyra Atoll could have potential impacts on native species. The International Union for the Conservation of Nature, Species Specialist Commission, Invasive Species Specialist Group recognizes a number of different mechanisms of impact that introduced species (which others have sometimes called alien species) can have on native ecosystems (Pagad et al. 2015 pp. 130–132). These include impacts through predation, competition, hybridization, or transmission of disease-causing pathogens to native species (Blackburn et al. 2014, pp. 4–7).

To assess the potential impacts that sihek may have on Palmyra Atoll and the mechanisms through which these impacts may occur, researchers on the recovery team conducted an environmental impact assessment, based on the Environmental Impact Classification for Alien Taxa (EICAT) (Blackburn et al. 2014, entire) and the Generic Impact Scoring System (Nentwig et al. 2010, entire). This process involved consulting with a range of relevant experts (n=19), who were asked to provide their judgment on the level of impact sihek may have through each potential impact mechanism. Impact levels were described in a range from the lowest level of “minimal,” where effects are negligible, to the highest level of “massive,” where impacts result in local extinction(s) and community-level changes are irreversible. We are evaluating the relative risk of competition, hybridization, predation impacts, and disease transmission, and the results will be summarized in our draft environmental assessment for this project.

In the EICAT assessment, experts considered predation to be the most likely impact of sihek introduction to Palmyra (although the magnitude of this factor was judged to be moderate at most). No listed species occur on Palmyra Atoll, and the EICAT assessment experts’ scoring

generally assessed the introduction of a novel avian predator. Therefore, we will focus post-release environmental monitoring on potential sihek prey species that are native to Palmyra Atoll. We will obtain sihek diet information through behavioral observation and fecal samples, as described above (**Release Procedures** and **Monitoring and Evaluation**). This information will highlight major components of sihek post-release diet and help guide more focused monitoring.

At a minimum, we will coordinate with The Nature Conservancy and Palmyra National Wildlife Refuge to carry out annual monitoring on a range of suitable prey items, as described above. We will use the most appropriate survey methods for different taxa. In the event that dietary and behavioral observations of released sihek suggest a particular prevalence and abundance of specific prey items that are of conservation concern, we will establish more frequent monitoring surveys. We will analyze post-release monitoring data to obtain estimates of abundance and density for reference taxa. These estimates will then be compared with pre-release monitoring data, collected in the weeks prior to release, with estimates from paired locations across the island in a before-after, control-impact experimental design. In the event we find estimated impacts to be unacceptably high, such as preferential prey selection for one species such that it has population-level effects, we will activate an appropriate response (see *Exit Strategy*, below). Annual reports that summarize monitoring and management activities will be developed by the Zoological Society of London in collaboration with the Service, The Nature Conservancy, and the Sihek Recovery Team.

Exit Strategy

Depending on the circumstances, the Service may either terminate the release program, or temporarily pause the release program to address identified issues before resuming. These scenarios and the Service's expected response are detailed below.

The Service will terminate the release program on Palmyra Atoll if:

(1) Monitoring indicates the benefits from the Palmyra population (including learning and refining release and support strategies for eventual releases on Guam) no longer outweigh the risks to the species or the welfare of the NEP or ex situ population; or

(2) monitoring shows unacceptable impacts on the ecosystem that can be clearly causally linked to the introduction of sihek.

In addition to these “must terminate” scenarios, the Service may also terminate the release program:

(3) When the purposes of the program have been realized (e.g., we have developed successful release and monitoring methodologies to apply to future release efforts or we have demonstrated sihek can survive and reproduce in the wild without human intervention, see **Importance of the NEP to Recovery Efforts**), although we do not anticipate this scenario until 10 or more years after the first release.

The Service may also temporarily suspend the program to address issues that arise before program termination. The monitoring team will summarize information they collect on a regular basis and will share it with the recovery team and the managers of Palmyra Atoll (the Service and The Nature Conservancy). If results indicate the program is approaching scenario (1) or (2) above, then the Service, in consultation with the recovery team and The Nature Conservancy, will determine if terminating the program is the best way to avoid these outcomes, or whether the program should be paused and adaptive steps taken to address them before resuming the program.

Regular monitoring and reporting will also inform progress toward achieving program goals and scenario (3) above: The Service will determine—in consultation with the recovery team and The Nature Conservancy—when the purpose of the NEP has been achieved such that the program can come to an end. When the Service terminates the program, the Service will also address what will happen with any remaining individuals in the NEP, i.e., whether they will be

relocated to captivity, relocated to other suitable habitat, or remain on Palmyra, based on the circumstances at the time of termination.

Findings

Based on the best scientific and commercial data available (in accordance with 50 CFR 17.81), we find that releasing sihek onto Palmyra Atoll with the regulatory provisions in this proposed rulemaking will further the conservation of the species. We find that the continued presence of the brown treesnake on Guam means that the sihek's native habitat has been unsuitably and irreversibly altered or destroyed for the foreseeable future such that the proposed introduction of the sihek to Palmyra Atoll outside of its probable historical range is warranted and consistent with our regulations at 50 CFR 17.81. The nonessential experimental population status is appropriate for the introduced population; the potential loss of the experimental population would not appreciably reduce the likelihood of the survival of the species in the wild because there are currently no sihek remaining in the wild.

Required Determinations

Regulatory Planning and Review (Executive Orders 12866 and 13563)

Executive Order 12866 provides that the Office of Information and Regulatory Affairs (OIRA) in the Office of Management and Budget will review all significant rules. OIRA has determined that this proposed rule is not significant.

Executive Order 13563 reaffirms the principles of E.O. 12866 while calling for improvements in the Nation's regulatory system to promote predictability, to reduce uncertainty, and to use the best, most innovative, and least burdensome tools for achieving regulatory ends. The Executive order directs agencies to consider regulatory approaches that reduce burdens and maintain flexibility and freedom of choice for the public where these approaches are relevant, feasible, and consistent with regulatory objectives. E.O. 13563 emphasizes further that

regulations must be based on the best available science and that the rulemaking process must allow for public participation and an open exchange of ideas. We have developed this proposed rule in a manner consistent with these requirements.

Regulatory Flexibility Act (5 U.S.C. 601 et seq.)

Under the Regulatory Flexibility Act (as amended by the Small Business Regulatory Enforcement Fairness Act (SBREFA) of 1996; 5 U.S.C. 601 et seq.), whenever a Federal agency is required to publish a notice of rulemaking for any proposed or final rule, it must prepare, and make available for public comment, a regulatory flexibility analysis that describes the effect of the rule on small entities (i.e., small businesses, small organizations, and small government jurisdictions). However, no regulatory flexibility analysis is required if the head of an agency certifies that the rule will not have a significant economic impact on a substantial number of small entities. SBREFA amended the Regulatory Flexibility Act to require Federal agencies to provide a statement of the factual basis for certifying that a rule will not have a significant economic impact on a substantial number of small entities. We certify that, if finalized, this proposed rule would not have a significant economic effect on a substantial number of small entities. The following discussion explains our rationale.

The areas that would be affected under this proposed rule are restricted to Palmyra Atoll. Because of the regulatory flexibility for Federal agency actions provided by the NEP designation and the exemption for incidental take in the rule, we do not expect this proposed rule to have significant effects on any activities within Federal, State, or private lands within the NEP area. In regard to section 7(a)(2) of the Act, the population would be treated as proposed for listing, and, therefore, Federal action agencies would not be required to consult on their activities, except on National Wildlife Refuge System lands, where the NEP would be treated as a threatened species for the purposes of section 7 of the Act.

Section 7(a)(4) of the Act requires Federal agencies to confer (rather than consult) with the Service on actions that are likely to jeopardize the continued existence of a species proposed

for listing. However, because the NEP is, by definition, not essential to the survival of the species, and there are no sihek in the wild outside of the NEP area that could be impacted, conferring will likely never be required for the sihek population within the NEP area.

Furthermore, the results of a conference are advisory in nature and do not restrict agencies from carrying out, funding, or authorizing activities. Section 7(a)(1) of the Act requires Federal agencies to use their authorities to carry out programs to further the conservation of listed species, which would apply on any lands within the NEP area. On National Wildlife Refuge System lands within the NEP area, the sihek would be treated as a threatened species for the purposes of section 7 of the Act. As a result, and in accordance with our regulations, some modifications to proposed Federal actions within National Wildlife Refuge System lands may occur to benefit the sihek, but we do not expect projects to be substantially modified because these lands are already administered in a manner that is compatible with sihek conservation.

This proposed rule if finalized would broadly authorize incidental take of the sihek within the NEP area. The regulations implementing the Act define “incidental take” as take that is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity, such as habitat management, infrastructure maintenance, and other activities in the NEP area that are in accordance with Federal, Tribal, State, and local laws and regulations. Intentional take for authorized data collection or recovery purposes by authorized personnel are also allowed under the NEP designation. Other forms of intentional take would require a section 10(a)(1)(A) recovery permit under the Act.

The only private landowners on Palmyra Atoll are The Nature Conservancy and the Cooper family. The principal activities on private property near the proposed release site are associated with scientific field station operations, including the operation of a landing strip for aircraft, and some limited recreation. The presence of the sihek is not likely to significantly affect the use of lands for these purposes because there will be no new or additional economic or regulatory restrictions imposed upon private landowners due to the presence of the sihek.

Therefore, this proposed rulemaking is not expected to have any significant adverse impacts to activities on private lands within the NEP area.

Unfunded Mandates Reform Act (2 U.S.C. 1501 et seq.)

In accordance with the Unfunded Mandates Reform Act (2 U.S.C. 1501 et seq.):

(1) This rule would not “significantly or uniquely” affect small governments. We have determined and certify pursuant to the Unfunded Mandates Reform Act, that, if adopted, this rulemaking would not impose a cost of \$100 million or more in any given year on local or State governments or private entities. A small government agency plan is not required. Small governments would not be affected because the proposed NEP designation would not place additional requirements on any city, county, or other local municipalities.

(2) This rule would not produce a Federal mandate of \$100 million or greater in any year (i.e., it is not a “significant regulatory action” under the Unfunded Mandates Reform Act). This proposed NEP designation for the sihek would not impose any additional management or protection requirements on the States or other entities.

Takings (E.O. 12630)

In accordance with Executive Order 12630, the proposed rule does not have significant takings implications. When introduced populations of federally listed species are designated as nonessential experimental populations, the Act’s regulatory requirements regarding the introduced population are significantly reduced. This proposed rule would allow for the taking of sihek when such take is incidental to an otherwise legal activity.

A takings implication assessment is not required because this proposed rule: (1) Would not effectively compel a property owner to suffer a physical invasion of property and (2) would not deny all economically beneficial or productive use of the land or aquatic resources. This proposed rule would substantially advance a legitimate government interest (conservation and recovery of a listed species) and would not present a barrier to all reasonable and expected beneficial use of private property.

Federalism (E.O. 13132)

In accordance with Executive Order 13132, we have considered whether this proposed rule has significant federalism effects and have determined that a federalism assessment is not required. This proposed rule would not have substantial direct effects on the States, on the relationship between the Federal Government and the States, or on the distribution of power and responsibilities among the various levels of government. In keeping with Department of the Interior policy, we requested information from and coordinated development of this proposed rule with the affected resource agencies in Guam. Achieving the recovery goals for this species will contribute to its eventual delisting. No intrusion on Territory policy or administration is expected, roles or responsibilities of Federal or Territory governments would not change, and fiscal capacity would not be substantially directly affected. The proposed rule operates to maintain the existing relationship between the Territory and the Federal Government and is being undertaken in coordination with the Territory of Guam. We have cooperated with the Guam Department of Agriculture in the preparation of this proposed rule. Therefore, this proposed rule does not have significant federalism effects or implications to warrant the preparation of a federalism assessment pursuant to the provisions of Executive Order 13132.

Civil Justice Reform (E.O. 12988)

In accordance with Executive Order 12988 (February 7, 1996, 61 FR 4729), the Office of the Solicitor has determined that this proposed rule would not unduly burden the judicial system and would meet the requirements of sections (3)(a) and (3)(b)(2) of the Order.

Paperwork Reduction Act

This proposed rule does not contain any new collection of information that requires approval by the Office of Management and Budget (OMB) under the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 et seq.). OMB has previously approved the information collection requirements associated with permitting and reporting requirements associated with native

endangered and threatened species, and experimental populations, and assigned the following OMB Control Numbers:

- 1018–0094, “Federal Fish and Wildlife Permit Applications and Reports—Native Endangered and Threatened Species; 50 CFR parts 10, 13, and 17” (expires 01/31/2024), and
- 1018–0095, “Endangered and Threatened Wildlife, Experimental Populations, 50 CFR 17.84” (expires 9/30/2023).

An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number.

National Environmental Policy Act

In compliance with all provisions of the National Environmental Policy Act of 1969 (NEPA), we are in the process of analyzing the impact of this proposed rule. Based on this analysis and any new information resulting from public comment on the proposed action and our impact analysis, we will determine if there are any significant impacts or effects that would be caused by this rule. In cooperation with The Nature Conservancy, we are preparing a draft environmental assessment, which will be made available for public inspection and comment when it is complete. All appropriate NEPA documents will be finalized before this rule is finalized.

Energy Supply, Distribution, or Use (E.O. 13211)

Executive Order 13211 requires agencies to prepare statements of energy effects when undertaking certain actions. This rule is not expected to significantly affect energy supplies, distribution, and use. Therefore, this action is not a significant energy action and no statement of energy effects is required.

Clarity of This Regulation (E.O. 12866)

We are required by Executive Orders 12866 and 12988 and by the Presidential Memorandum of June 1, 1998, to write all rules in plain language. This means that each rule we publish must:

- (a) Be logically organized;
- (b) Use the active voice to address readers directly;
- (c) Use clear language rather than jargon;
- (d) Be divided into short sections and sentences; and
- (e) Use lists and tables wherever possible.

If you feel that we have not met these requirements, send us comments by one of the methods listed in **ADDRESSES**. To better help us revise the rule, your comments should be as specific as possible. For example, you should tell us the numbers of the sections or paragraphs that are unclearly written, which sections or sentences are too long, the sections where you feel lists or tables would be useful, etc.

References Cited

A complete list of all references cited in this proposed rule is available upon request from the Pacific Islands Fish and Wildlife Office (see **FOR FURTHER INFORMATION CONTACT**) or online at <https://www.regulations.gov> in Docket No. FWS-R1-ES-2022-0061.

Author

The primary author of this proposed rule is Megan Laut of the Pacific Islands Fish and Wildlife Office (see **FOR FURTHER INFORMATION CONTACT**).

List of Subjects in 50 CFR 17

Endangered and threatened species, Exports, Imports, Reporting and recordkeeping requirements, Transportation.

Proposed Regulation Promulgation

Accordingly, we propose to amend part 17, subchapter B of chapter I, title 50 of the Code of Federal Regulations, as set forth below:

PART 17—ENDANGERED AND THREATENED WILDLIFE AND PLANTS

1. The authority citation for part 17 continues to read as follows:

AUTHORITY: 16 U.S.C. 1361–1407; 1531–1544; and 4201–4245, unless otherwise noted.

2. Amend § 17.11 in paragraph (h) in the List of Endangered and Threatened Wildlife under BIRDS by removing the entry for “Kingfisher, Guam Micronesian (*Halcyon cinnamomina cinnamomina*)” and adding in its place two entries for “Kingfisher, Guam (*Todiramphus cinnamominus*)” to read as follows:

§ 17.11 Endangered and threatened wildlife.

* * * * *

(h) * * *

Common name	Scientific name	Where listed	Status	Listing citations and applicable rules
* * * * *	* *	BIRDS		
* * * * *	* *			
Kingfisher, Guam (sihek)	<i>Todiramphus cinnamominus</i>	U.S.A. only, except where listed as an experimental population	E	49 FR 33881, 8/27/1984; 50 CFR 17.95(b) ^{CH} .
Kingfisher, Guam (sihek)	<i>Todiramphus cinnamominus</i>	U.S.A. (Palmyra Atoll)	XN	[<i>Federal Register</i> citation of the final rule]; 50 CFR 17.84(a) ^{10j} .
* * * * *	* *			

3. Amend § 17.84 by adding a new paragraph (a) to read as follows:

§ 17.84 Special rules—vertebrates.

(a) Guam kingfisher, sihek (*Todiramphus cinnamominus*).

(1) *Where is the occurrence of sihek designated as a nonessential experimental population (NEP)?* The nonessential experimental population (NEP) area for the sihek is

Palmyra Atoll. Palmyra Atoll is located in the Northern Line Islands, approximately 1,000 miles (1,609 km) south of Honolulu, Hawaii (5° 53`N latitude, 162° 05`W longitude). The extent of the NEP area for sihek is the 250 ha (618 ac) of emergent land distributed among 25 islands, inclusive of the lagoons surrounding those islands.

(2) *What take of sihek is allowed in the NEP area?* (i) Throughout the sihek NEP area, you will not be in violation of the Act if you take a sihek, provided such take is nonnegligent and incidental to a lawful activity, such as habitat management, invasive species management, or scientific research and monitoring, and you report the take as soon as possible as provided under paragraph (a)(2)(iii) of this section.

(ii) Any person with a valid permit issued by the Service under § 17.32 may take sihek in the NEP area, pursuant to the terms of the permit. Additionally, any employee or authorized agent of the Service, Guam Division of Aquatic and Wildlife Resources, The Nature Conservancy, Zoological Society of London, Association of Zoos and Aquariums, and Calgary Zoo who is designated and trained to capture, handle, band, attach transmitters, and collect biological samples, when acting in the course of official duties, may take a sihek within the NEP area if such action is necessary to:

(A) Handle birds for scientific purposes such as banding, measuring, and sample collection;

(B) Relocate individuals or bring individuals into captivity for the purposes of increasing sihek survival or fecundity;

(C) Aid a sick, injured, or orphaned sihek;

(D) Salvage a dead specimen that may be useful for scientific study;

(E) Dispose of a dead specimen;

(F) Aid in law enforcement investigations involving the sihek; or

(G) Take sihek into captivity in accordance with the exit strategy of the program (see paragraph (i)(5) of this section).

(iii) Any take pursuant to paragraphs (a)(2)(i) or (a)(2)(ii)(C) through (E) of this section must be reported as soon as possible to the Permits Coordinator, Pacific Islands Fish and Wildlife Office, 300 Ala Moana Boulevard, Room 3–122, Honolulu, Hawaii 96850 (808/792–9400), who will determine the disposition of any live or dead specimens.

(3) *What take of sihek is not allowed in the NEP area?* (i) Except as expressly allowed in paragraph (a)(2) of this section, all of the provisions of § 17.31(a) and (b) apply to the sihek in areas identified in paragraph (a)(1) of this section, and any manner of take of a member of the NEP not described under paragraph (a)(2) of this section is prohibited.

(ii) You must not possess, sell, deliver, carry, transport, ship, import, or export, by any means whatsoever, any sihek or part thereof from the experimental population taken in violation of the regulations in this paragraph (a) or in violation of applicable Territorial laws or regulations or the Act.

(iii) It is unlawful for you to attempt to commit, solicit another to commit, or cause to be committed, any take of sihek, except as expressly allowed in paragraph (a)(2) of this section.

(4) *How will the effectiveness of this introduction be monitored?* The Service will evaluate the introduction on an annual basis. This evaluation will include, but will not be limited to, a review and assessment of management issues, sihek movements, and post-release behavior; food resources and dependence of sihek on supplemental food; fecundity of the population; causes and rates of mortality; program costs; impacts to the ex situ population; and information gathered to inform releases on Guam or other sites.

(5) *When will this introduction end?* Depending on the circumstances, the Service may either terminate the release program or temporarily pause the release program to address identified issues before resuming. When the Service terminates the program, the Service will address the disposition of any remaining individuals in the NEP, i.e., whether they will be relocated to captivity or to other suitable habitat or whether they would remain on Palmyra, based on the circumstances at the time of termination.

(i) The Service will terminate the release program on Palmyra Atoll if monitoring indicates that:

(A) The benefits from the Palmyra population (including developing and refining release and support strategies for eventual releases on Guam) no longer outweigh the risks to the species or the welfare of the NEP or ex situ population; or

(B) Unacceptable impacts on the ecosystem can be clearly causally linked to the introduction of sihek.

(ii) The Service may also terminate the release program when one or more of the objectives of the program have been achieved (e.g., we have developed successful release and monitoring methodologies to apply to future release efforts or we have demonstrated that sihek can survive and reproduce in the wild without human intervention).

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Martha Williams,

Director,

U.S. Fish and Wildlife Service.

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